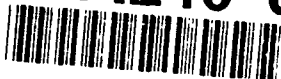


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WILL THE MILITARY SEALIFT BECOME OUR ACHILLES HEEL?

by

Robert E Houser

Captain, United States Navy

A paper submitted to the Faculty of the Naval War College in partial satisfaction of the requirements of the Department of Operations.

The contents of this paper reflect my own personal views and are not necessarily endorsed by the Naval War College or the Department of the Navy.

Signature

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## TABLE OF CONTENTS

CHAPTER		PAGE
ABSTRACT . . . . .		ii
I	INTRODUCTION . . . . .	1
	The Problem . . . . .	1
II	MILITARY SEALIFT . . . . .	2
	Historical need and Mission . . . . .	2
	Composition of the Military Sealift Command . . . . .	3
	Sealift Requirements. . . . .	5
	Military Sealift Successes in Operations	
	Desert Shield and Desert Storm . . . . .	8
	Limitations and Shortcomings of the Military	
	Sealift in Desert Shield and Desert Storm . . . . .	11
	Long Range Limitations of our Military Sealift	13
	Programs to Correct the Problems. . . . .	16
III	Conclusions . . . . .	19
	Implications for the Future . . . . .	19
	Impact for Operational Planning . . . . .	21
NOTES . . . . .		24
BIBLIOGRAPHY . . . . .		28

# WILL THE MILITARY SEALIFT BECOME OUR ACHILLES HEEL?

## CHAPTER I

### INTRODUCTION

The Problem. The vital requirement for military sealift has a historical basis and an expanding role as the United States draws down the size of its armed forces and decreases presence in overseas bases. This expanding requirement comes at a time when the merchant marine force is experiencing a rapidly decreasing size in both ships and the mariners to operate this fleet. Although the shortfall was recognized by the Congress several years ago, and some programs were initiated, lingering shortcomings are still evident and must be compensated for in future planning.

This paper will examine the historical and present requirements for military sealift, review the present composition, along with the recent additions of the Fast Sealift Ships (FSS), Military Preposition Ships (MPS) and their significant contribution in the build up of forces in Saudi Arabia following Iraq's invasion of Kuwait. The limitations and shortcomings which became obvious in the operation will also be examined. The implications and operational impact of these shortcomings will then be discussed as serious considerations to be weighed by planning staffs.

## CHAPTER II

### MILITARY SEALIFT

Historical Need and Mission. The requirement for strong, efficient and solid lines of communication are an obvious element for the successful employment for any military force. Its absolute need is documented in any writing on the fighting forces. Clausewitz discusses the need for lines of communication to maintain the army, while they form a unity with the operational base. He describes them as the arteries of the army for deliveries of ammunition, mail, medical supplies, other essential cargo and personnel; all being vital to the army.<sup>1</sup> Our concern is with supply of the U.S. armed forces via the sea, that of our sealift requirement as a maritime nation so dependent on the oceans. As former Chief of Naval Operations ADM Thomas B. Hayward told Congress ten years ago, "without adequate sealift there will be no way to carry out any of the nation's otherwise very calculated military contingency plans."<sup>2</sup> That sealift comes primarily from our organic merchant marine operating military chartered ships and our privately owned merchant fleet. The latter, Alfred T. Mahan pointed out, serves the country's commercial interests in peacetime and can become an integral part of the Navy's active fleet in wartime.<sup>3</sup> The former organic military sealift capacity will be our focus, being the primary means of our lifting capacity, along with attention on the

merchant mariners, which operate both fleets. The merchant marine has been described as a tactical element of sea power and as the fourth arm of the alliance in its essential role to the preservation of the North Atlantic Treaty Organizations' (NATO) security.<sup>4</sup>

The military sealift is directed and controlled by the Military Sealift Command (MSC), which is organized under Commander-in-Chief of the Transportation Command. The Military Sealift Command's primary mission "is to provide sealift for strategic mobility in support of national security objectives". The mission requires sealift capacity to deploy and sustain our forces wherever and whenever needed, to do so rapidly and for as long as operational requirements dictate.<sup>5</sup> The MSC must supply the forces in its normal peacetime role as well as in a contingency or war, and during a war, 99 percent of the petroleum products and 95 percent of dry cargo will need to be carried by ship.<sup>6</sup>

Composition of the Military Sealift Command. The MSC comprises both active and inactive ships, as well as the ability to charter privately owned and foreign owned vessels to carry out its sealift mission. During normal peacetime operations, the MSC charters 11 U.S. flagged dry cargo ships and 26 tankers used in routine transportation of Department of Defense supplies. Many of these work on a daily basis with the Navy and are manned by the merchant marine, sometimes with Navy augmented communications teams or some

supply corps specialists. The remainder of the command is made up of ships in a standby status, listed below:

- 8 Fast Sealift Ships (FSS) civilian ships converted to roll on/roll off capability, held in a ready status to sail in five days.
- 25 Prepositioned ships (long term charters)
  - 13 Maritime Prepositioning Ships (MPS) loaded with Marine equipment and forward deployed.
  - 12 Afloat Prepositioning Ships (APS) loaded with Army and Air Force equipment, forward deployed.
- 2 Aviation Logistic Support ships.
- 2 Hospital ships.
- 8 Auxiliary Crane ships.
- 96 Ready Reserve Force (RRF) ships, mostly former dry cargo and tankers.

In addition to the above, the MSC has access to:

- 131 National Defense Reserve Force (NDRF) ships, former World War II vessels, most useless, requiring 120 days or more to put into service.
- 270 U.S. flagged ships, 132 of which are useful in a military role.<sup>7</sup>

During a national emergency of great proportion or in the event of a NATO conflict, there could be access to:

- 138 U.S. Owned but foreign flagged ships, referred to as Effective U.S. Control (EUSC)
- 450 NATO Controlled ships<sup>8</sup>

In a crisis, the above ships would be used in two roles, the

first that of surge shipping during the initial mobilization of the conflict or emergency, and then in a sustainment role to continue and maintain the resupply.<sup>9</sup>

Sealift Requirements. We have touched briefly on the basic requirements for sealift and mentioned one of the daily missions during peacetime of the Naval Fleet Auxiliary Force (NFAF), the 37 or so tankers and dry cargo ships which transfer fuel, food, ammunition, spare parts to assist in keeping the Navy's combat ships at sea.<sup>10</sup> The main requirement for sealift arises in the event of war and has been based on the threat of another war on the European landmass in support of NATO. The requirement was based on the U.S. commitment made to NATO in 1982 to have 10 divisions of reinforcements in Europe within 10 days of the decision to execute, and then plan to have another 10 divisions committed to NATO within the first few months of a conflict.<sup>11</sup> That resupply would require transporting some 23.5 million tons of cargo in the first 180 days, which is almost six times the tonnage shipped in a full year (7.1 million tons of cargo were shipped in 1987 to our forces, four million of which went to Europe). It is obvious if a conflict occurred in Europe, additional sealift requirements would rise exponentially.<sup>12</sup> Approximately 1,000 ships would be needed to move the estimated 23.5 million tons to resupply the U.S. forces in Europe and another 700 ships would be needed to resupply our NATO Allies. Assuming the normal economic cargo trade would continue, which amounts to

1.3 billion tons annually, we can estimate an additional 1400 ships would be required, or an estimated 3,100 ships required to maintain our economy and sustain the military effort in a protracted NATO conflict.<sup>13</sup>

One might ask what role airlift would plan in this reinforcement and the response would be a small part, roughly five percent. To put the airlift in perspective, consider that the total carrying capacity of the U.S. strategic airlift fleet of 110 C-5 Galaxy and 234 C-141 Starlifter aircraft can only carry a three to four ship capacity equivalent.<sup>14</sup> Even the addition of the new C-17 long range transport, which is smaller than the C-5, will not reduce much the overall resupply requirement.

A quick mental calculation of the above requirements and the available assets to the Military Sealift Command, an obvious shortfall is realized. In fact, numerous military leaders, past and present have expressed their concern that the Army can't get to war on time. Admiral Isaac C. Kidd, Jr, USN(ret) three years Supreme Allied Commander, Atlantic; Admiral C.A.H.Trost, USN(ret) former Chief of Naval Operations; General Carl E. Vuono, the Army's Chief of Staff; and General John R. Galvin, the Supreme Allied Commander Europe have all publically reiterated the limitations of our sealift. Defense analysts and other defense experts have gone on record with the Congress that the present strategic lift capability would take closer to 30 days to move 10 Divisions to Europe instead of the 10

days promised.<sup>15</sup> ADM Kidd asserts that the strain of a conflict in Europe could possibly collapse the logistics system of the alliance.<sup>16</sup> Additionally, the regional commanders-in-chiefs of the unified commands cite fast sealift ships and sealift forces overall as their biggest long term need.<sup>17</sup>

The reason for this alarming outcry is the declining U.S. merchant fleet and U.S. shipbuilding capacity. In World War II there were over 5000 ships in the merchant marine which downsized to somewhat over 2100 in 1947, just after the war. This decline continued to erode to some 893 U.S. flagged ships in 1970, to 424 ships in 1989 and only 367 vessels in 1990.<sup>18</sup> The U.S. merchant marine presently ranks but 13th in the number of ships compared to other countries of the world, behind Japan, South Korea and the Soviet Union to mention but a few.<sup>19</sup> It is noteworthy also that in 1950, U.S. flagged vessels carried almost 50 percent of our seaborne trade, while in 1990, even though the country imports and exports eight times the 1950 gross tonnage, U.S. flagged vessels carried less than four percent and that percentage is expected to shrink to about one percent by the year 2000 if the erosion of the maritime industry continues.<sup>20</sup> ADM Trost, in his change of command speech for the Military Sealift Command in June of 1990 indicated further that commercial ships in new construction show a similar decline with not a single merchant ship built in a U.S. shipyard since 1987 and elaborates that the

"merchant marine and industrial base ...pose a clear and growing danger to our future security and prosperity."<sup>21</sup> In the industrial base, at least 76 U.S. shipyards or ship repair facilities, along with 38 major dry docking activities have closed since 1982 and shipyard suppliers and marine design industry closings have paralleled the trend.<sup>22</sup> This hardly lends credence to the roots of our sea going heritage and our dependence on sea trade. A very similiar trend appears in the NATO arena, where only 496 of the 600 ship sealift effort to be contributed by our cross Atlantic allies are available, with their overall tonnage capacity shrinking by 39 percent since 1979.<sup>23</sup>

Less apparent is the declining number of qualified crewmen to man and operate the merchant fleet. With the decline of the ships, the available seagoing billets have fallen from 100,000 in the 1970 to just 13,000 in 1990, and as we'll see later, are not complementary with our Ready Reserve Force ships.<sup>24</sup> This was the picture, bleak as it might have been going into Operation Desert Shield; the deployment of forces to Saudi Arabia beginning when Iraq invaded Kuwait on 2 August 1990.

Military Sealift Successes in Operations Desert Shield and Desert Storm. With the invasion of Kuwait by Iraq in August 1990, the United Nations mandated a military force build up to check any further advances by Saddam Hussain's army and insisted on his withdrawal from Kuwait. Thus began the largest deployment of U.S. forces since World War II.

Cargo planes inserted the initial wave of supplies and virtually all U.S. ground forces to Saudia Arabia. The majority of the supplies, however, 95 percent of the total volume fell on the shoulders of transport ships.<sup>25</sup> The activation of the sealift requirement was orchestrated by the Military Sealift Command. Their normal activation of resources was to follow the following sequence;

- Existing U.S. flag cargo ships under charter to the Navy.

- Prepositioned Ships(MPS and APS)

- Fast Sealift Ships(FSS)

- Contractual arrangements for space aboard regularly scheduled U.S. flag line operators

- Charter of additionally needed U.S. flag cargo ships

- Charter of foreign flag cargo ships (when sufficient U.S. flag ships are not available)

- Activation of the Ready Reserve Force

- Activation of the Sealift Readiness Program

- Requisitioning of ships.<sup>26</sup>

Because of the scale of the requirment, much of the sequence occurred simultaneously. 19 of the 25 prepositioned ships were ordered to sail toward the crisis and the eight Fast Sealift Ships (all roll on/roll off(ro-ro)) were activated. The two hospital ships, two aviation logistics support ships for the Marines, and 40 Ready Reserve Force (RRF) vessels were activated.<sup>27</sup> 25 shipyards around the nation participated in the effort to outfit the RRF ships in a timely manner.

These RRF ships averaged over 20 years old, and although none are considered commercially viable, their capability is critical to the surge effort of the mission. They consisted of 17 ro-ro ships, 15 breakbulk, two auxiliary crane ships, two heavy lift and three barge carriers.<sup>28</sup> In addition to the RRF ships called up, MSC chartered 38 foreign vessels and 10 U.S. flagged commercial ships to meet the lift requirements.<sup>29</sup> There was also container space chartered on both U.S. flag and foreign flag lines, equating to some 10,000 40-ft containers in just the first month of the deployment. Even with this surge in sealift capacity, there was a delay in meeting the initial deadlines. Only 11 of the activated RRF ships were ready to sail on time, given goals of five, 10, or 20 days; but considering their average age, the length of time layed up (some over 12 years) and the challenge to find qualified mariners to operate them, a herculean effort was executed.<sup>30</sup> In early November, the MSC again went into the activation mode when President Bush ordered the deployment of an additional 200,000 troops. MPS Squadron TWO in the Atlantic, which had not been ordered to sail with the initial MPS and APS ships, was directed to the Arabian Gulf and 20 ships were activated from the RRF between 9 November and 7 December (some were finished from the original call up while others were initiated). Again, 13 additional U.S. flag ships were chartered and a total of 75 foreign flag ships came under MSC charter.<sup>31</sup> In the overall picture, the sealift effort was most successful, in

spite of the criticism we heard prior to the Gulf Crisis. The investment in surge sealift capacity made in 1982 proved absolutely invaluable. This investment included the 96 RRF, the 12 Afloat Prepositioned Ships, the 13 Maritime Prepositioning Ships, the Eight Fast Sealift Ships, the hospital, aviation support and auxiliary crane ships, etc. Operation Desert Shield also demonstrated sustainment sealift as adequate through the use of container ships owned by the U.S. flag liner companies, although we did see some space chartering on foreign lines. Earlier criticism did show that we were still deficient in the surge phase of the sealift and the shortage of mariners to man the increased shipping became a wound to the operation.<sup>32</sup>

Limitations and Shortcomings of the Military Sealift in Desert Shield and Desert Storm. Although the overall success of Operations Desert Shield and Desert Storm have created near euphoric atmospheres, we need to examine closely the lessons learned and deficiencies that arose to improve and prepare for the next emergency. During the operation, one of the few outbreaks of interservice sniping was General Norman Schwarzkopf, Commander-in-Chief, Central Command, complaining publically about delays in the surge sealift, causing a slower than desired buildup of combat equipment. 95 percent of the heavy U.S. armor needed to come by ship and the RRF had several ships break down. With slow activation and deliveries arriving up to two weeks late, there was little between the Iraqi tank forces

along the Kuwaiti boarder and Saudi oil fields except the lightly armed U.S. paratroopers from the 82nd and 101st airborne divisions, who carried limited supplies with them.<sup>33</sup>

The most glaring problem area, which was predicted was the lack of adequate fast sealift.<sup>34</sup> Delays in activating the RRF resulted from the poor material condition of machinery, both propulsion and auxiliary; difficulties in obtaining spare parts (some foreign parts because of ships foreign built) and having to obtain and train crews for the antiquated steam plants on the ships (most modern commercial ships today are powered by diesel power plants).<sup>35</sup> Some finger pointing came from the Department of Transportation at the Congress for only funding \$89 million of the \$235 million requested to fund the RRF in 1990; essential maintenance funds for the 96 some ships in the force.<sup>36</sup> Even with the activation, three ships of the RRF had broken down and required towing into port, including one of the eight FSS ships, which ended up for a lengthy period in a shipyard. Three other ships required repairs along the way, adding several days delay to their transits.<sup>37</sup> Another problem was the shortage of roll on/roll off (ro-ro) ships essential for the heavy armor and combat equipment (tanks, trucks, large guns, constructions equipment, etc). Although the U.S had 17 ro-ros available, the MSC had to charter 19 additional ro-ros from foreign sources. VADM Donovan, Commander of the Military Sealift Command, confirmed this

shortfall and expressed the continued need for more ro-ro ships to the congress in February 1991.<sup>38</sup> Further criticism arose from the nations's shipyards which pointed out that the cost of chartering 12 foreign ro-ro ships cost \$290,000 a day, almost double th cost of four U.S. registered ro-ro totaling the same capacity at the cost of \$115,000 a day.<sup>39</sup> The chartering of the ro-ros was a result however of non-availability in the U.S. Likewise, because of the delays in activating the RRF and the immediate need for sealift, the foreign market was accessed. The activation sequence plan discussed calls for the chartering of some foreign vessels but because of the urgency, the foreign chartering exceeded that planned. VADM Donovan indicated that foreign vessels were closer to loading ports and more ready to sail than ships in the RRF force being activated, and were not chartered because of the cheaper price (about one half) that of the RRF. He emphasized availability was the driving consideration.<sup>40</sup>

The other major handicap in assembling the sealift was manning the RRF. There were not enough qualified merchant mariners to fully man the 44 RRF ships activated. With most modern merchant ships being diesel powered, few of todays seamen are trained in steam plants, which resulted in great difficulty finding second and third assistant engineers. One RRF ship was allowed to be crewed by Filipino nationals who had the requisite skills in steam propulsion.<sup>41</sup>

Long Range Limitations of our Military Sealift. There

are several deficiencies which we have seen having long range implications for the military planner.

The first of these is the shortage in mariners which became evident in Operation Desert Shield sealift. Not only is there are shortage of qualified seamen but over half of our merchant mariners working in the fleet are over 50 years of age.<sup>42</sup> The author of this paper has heard similarly from Masters of two MSC ships he worked with over the past two years, who stated their crews averaged 51-53 years old. They also were hindered by short manning and late reliefs even before the crisis. Another source heard from an MSC master of one of the RRF activated ships that one navigator called up from retirement was 82 years old. It becomes frightening to think of the problems the MSC might have had if tasked to activate the entire 96 ship RRF force, or the impossible undertaking if the 131 NDRF ships had required activation.<sup>43</sup> Many maritime industry sources look with alarm on the dwindling manpower problems, asserting that if an Operation like Desert Shield occurred five years from now, the trained pool of mariners would have been so small that the operations's outcome might have been vastly different.<sup>44</sup>

The second deficiency is the dependence shown on foreign operators. Of the 44 ro-ros chartered by the MSC, only 6 were U.S. flagged (not counting the 17 in the RRF).<sup>45</sup> By the time Desert Storm had run its course, MSC had chartered over 80 foreign vessels, which were not

supposed to be chartered unless there were insufficient U.S. flag ships available to meet required delivery dates. U.S. flag merchant ships were not requisitioned under the Sealift Readiness Program, whereby the Government can require U.S. flagged lines to operate for the Government.<sup>46</sup> VADM Donovan states that activation of the Sealift Readiness Program would have weakened the flexibility to quickly respond and was unnecessary because of the surge sealift capacity offered by our friends and allies.<sup>47</sup> In fact, over 80 foreign vessels were chartered which evidences our reliance on foreign sources. Our declining merchant marine and U.S. flag carriers find great difficulty competing internationally, and require substantial government subsidies. This results from much cheaper labor in both the mariners and shipbuilding workers throughout the rest of the world.<sup>48</sup> Intensifying competition comes from state controlled developing countries, i.e. Pan-Arab United Arab Shipping Company and highly competitive private fleets like those in Hong Kong. Soviet and East European merchant marines have also made inroads into the Western market. This has made industrial democracies increasingly vulnerable to foreign carriers.<sup>49</sup> Imagine if the foreign operators refused to transport our goods in a less agreeable conflict, or even just refused to carry our peacetime imports and exports. The consequences could be devastating. There were eight foreign flagged ships carrying war material which refused to enter the Persian Gulf and either required

containers to be loaded onto U.S. flag ships or had crews swapped by the operator.<sup>50</sup> However, in Operation Desert Shield, those instances were quite minimal, but the incidents do evidence the vulnerability.

Programs to Correct the Problem. The future sealift requirements will be driven by whatever new national strategy is forthcoming. Obviously, the national leadership must look at the changing world, what with projected troop reductions and equipment levels in Europe and Korea. This could lead one to assume a lesser commitment but the requirements of Operation Desert Shield demonstrated a continuing need for sealift. If troops and equipment are reduced from overseas basing, a greater need for sealift might arise. The Congress has recognized from both Operations Desert Shield and the alarms raised prior to the Gulf Crisis and appropriated some \$201.4 million for the construction of an unspecified number of sealift ships,<sup>51</sup> and Secretary of the Navy H. Lawrence Garrett, III has directed the Chief of Naval Operations to develop an Operational Requirement for additional Roll on/roll off ships for the sealift force. The Navy estimates an additional 25 ro-ros are required to meet the demand for future contingencies.<sup>52</sup>

A tougher problem is our declining merchant marine seamen. Even if we replaced our older steam powered RRF with diesel powered ships, the decline of our merchant marine force will not continue to produce replacements for our aging mariners. The Maritime Administration (MARAD)

sent to Congress in February 1991 legislation providing reemployment rights for licenced merchant mariners called up for Desert Shield. This would be similiar to the rights afforded Military Reservists, and be an initial step to insure a future pool of experienced, licenced seamen if another emergency should occur.<sup>53</sup> In line with this, a program has been proposed to maintain skeleton crews onboard the RRF ships at all times to keep crews trained and have the key nucleus to operated these ships.<sup>54</sup> Regular activations of the RRF vessels has also been suggested by Warren Leback, the head of MARAD, to ensure these ships meet their readiness requirements.<sup>55</sup> The creation of a Merchant Marine Reserve has been suggested to meet both licenced and unlicenced manpower needs in the future. The reserve mariners would have the same re-employment rights as military reservists.<sup>56</sup>

Current maritime policy is probably the main cause of our declining merchant marine. Operation Desert Shield has focused attention to the inadequate policy, the numerous outdated and rigid regulations that stifle the maritime industry. Secretary of Transportation Samuel K Skinner has called for deregulation of the maritime industry to help it survive and compete in the international market.<sup>57</sup>

Whether this occurs remains to be seen.

Even while Operations Desert Shield was in progress, President Bush approved the National Security Sealift Policy, prepared by the National Security Council. The

policy provides reliance on the U.S. owned commercial ocean carriers to assist in peace, crisis and war to the extent possible. It addressed the U.S. flagged tonnage and U.S. owned, but foreign flagged tonnage available to meet defense deployment and essential economic requirements.<sup>58</sup> It is worth noting that the MSC did not access much of this fleet and a reliable but non-attributable speaker in a presentation at the Naval War College indicated this source was minimized so the U.S. owned fleets would not lose their peacetime routes, as happened to much of the commercial fleet of Britain following the Falklands War.

## CHAPTER III

### CONCLUSIONS

Implications for the Future. An identified shortfall in our nation's surge sealift capability was identified prior to Operations Desert Shield and Desert Storm, and as predicted, became the focus of attention at the highest levels. Even with those deficiencies, the sealift execution was suprisingly efficient, and contributed directly to the success of the operation. However, even with the success and the shortfalls pointed out, we need to consider some relevant peculiarities that were specific to Desert Shield. This operation was not a worst case scenario, for we did not have to fight our way in or create large convoys with massive protection. We suffered no attrition in this evolution, which could have severely impacted the outcome. Consider that in World War II, the allies lost 5,150 ships, 4000 of which were lost before the end of 1942. That accounted for 21,570 million tons of equipment and cargo. If we used some planning factors for attrition of 10-31 percent for the first 30 days of a conflict, we might imagine the results and incapability to recover with our present merchant marine.<sup>1</sup>

If we met opposition to our resupply lines, would we have found as many foreign charters willing to venture into the theater of action? It has been suggested that if our

supporters started to get cold feet and we had to transport everything, a real strain would have been felt,<sup>2</sup> and our sealift capability to handle it all alone did not exist.

Operation Desert Shield occurred in a country with an incredible infrastructure, including some of the most modern ports and newest airports in the world. Our logistical offload could have been extremely complicated if modern containerized port facilities and superior docking were unavailable.

Having the crisis on top of the worlds largest oil production fields nearly eliminated the tanker pipeline which would have doubled the amount of sealift required to sustain the forces. It is worth noting that most of the RRF force which was not activated were tankers, not required because of the in place availability of petroleum, oil and lubricants (POL).

Timing also worked to our advantage. Although we saw the frustration of the delay in the initial surge of moving the heavy combat equipment, we gained almost six months until the combat forces engaged. It was almost three months into the build up when the sealift effort leveled into a sustainment phase, and then the additional 200,000 troops were ordered in November 1990 for another surge.

Because of these factors we cannot draw too much consolation from the success of our sealift efforts, for without any of the above benefits, the outcome of the Operation could have caused the sealift effort and final outcome to be much different.

We need more ro-ro ships and need to maintain our RRF better, along with training crews for those type vessels. More importantly we need to rebuild our merchant marine, including the ships, the qualified mariners and have both a peace time and war time reserve force to man the sealift assets.

We saw some historical firsts in the Operations. We used immediately our MPS and APS assets, and quickly activated our FSS ships and then 44 of our 96 RRF ships. The MSC chartered and integrated a substantial foreign flag force and we saw records broken in offloading and onloading. We married up prepositioned equipment with airlifted troops and saw a high percentage of reliability of our shipping. However, we must pay heed to the limitations discovered in the system and work to overcome them and plan around them in the future.

Impact for Operational Planning. Given the success of the sealift effort in Operation Desert Shield, the planners of military planning staffs must be careful to not over rate the sealift capability. The following considerations must be accounted for in future plans:

- 1) What is the infrastructure of the resupply ports in the crisis area? Will they support a quick off load of material or will the supply line be supported over a beach area? Is there a option in the plan to capture or use a good port?

- 2) Consider the availability of POL and the additional

sealift required to move it to the crisis area. Remember that the merchant marine is constrained by available qualified seamen and expansion of the force may not be possible five or 10 years from now.

3) In light of the above, how will the international community look on our nation's action? Will we be able to form a large coalition with multiple allies, willing to charter their commercial fleets and support the effort, or will the U.S. conduct the operation alone?

4) What is the status of forward deployed forces? Will all our personnel and equipment have to be transported from the States, increasing the sealift requirement?

5) What is the danger of attrition to our sealift? This must be factored in if a threat exists and protection for the sealift may employ naval assets which might have been used in another role.

6) What is the worst case scenario? Will we have to fight our way in to place our fighting forces? If so, attrition and delays will require consideration and analysis.

7) What has been the effect of the programs started to correct the shortfalls in our merchant marine? In our shrinking defense budget and present recession, a strong shipbuilding program is unlikely, especially in the supporting arms. Recessions do not expand employment and training in an industry that has been on the decline through the economic boom of the 1980s.

Will our merchant marine force support the next crisis or have we discovered our Achilles Heel and not had it heal in time for the next emergency? The military planner cannot pass this off as the Department of Transportation's problem. The astute planner must be aware of his need for supply and ensure he factors in the true capability of our sealift. We must be prepared to respond unilaterally to any crisis where our national interests are at stake, and we need the military sealift to get our forces to the war on time.

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